

WHAT IS CLAIMED IS:

1. A process for identifying an agent that modulates the activity of a cancer-related gene comprising:

5 (a) contacting a compound with a cell expressing a gene that corresponds to a polynucleotide having a sequence selected from the group consisting of SEQ ID NO: 1, 3, 4, 6, 8, 10, 12, 14, 16, 17, 19, 20, 21, 23, 25, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 45, 47, 48, 50, 51, 52, 54, 56, 58, 60, 62, 64, 65, 67 and 68 and under conditions promoting the expression of said
10 gene; and

(b) detecting a difference in expression of said gene relative to when said compound is not present

thereby identifying an agent that modulates the activity of a cancer-related gene.

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2 The process of claim 1 wherein said gene has a sequence selected from the group consisting of SEQ ID NO: 1, 3, 4, 6, 8, 10, 12, 14, 16, 17, 19, 20, 21, 23, 25, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 45, 47, 48, 50, 51, 52, 54, 56, 58, 60, 62, 64, 65, 67 and 68.

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3. The process of claim 1 wherein the cell is a cancer cell and the difference in expression is a decrease in expression.

4. The process of claim 3 wherein said cancer cell is a prostate cancer
25 cell.

5. A process for identifying an anti-neoplastic agent comprising contacting a cell exhibiting neoplastic activity with a compound first identified as a cancer related gene modulator using the process of claim 1 and
30 detecting a decrease in said neoplastic activity after said contacting compared to when said contacting does not occur.

6. The process of claim 5 wherein said neoplastic activity is accelerated cellular replication.

7. The process of claim 5 wherein said decrease in neoplastic activity
5 results from the death of the cell.

8. A process for identifying an anti-neoplastic agent comprising administering to an animal exhibiting a cancer condition an effective amount of an agent first identified according to the process of claim 1 and detecting a
10 decrease in said cancerous condition.

9. A process for determining the cancerous status of a cell, comprising determining an increase in the level of expression in said cell of a gene that corresponds to a polynucleotide having a sequence selected from the group
15 consisting of SEQ ID NO: 1, 3, 4, 6, 8, 10, 12, 14, 16, 17, 19, 20, 21, 23, 25, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 45, 47, 48, 50, 51, 52, 54, 56, 58, 60, 62, 64, 65, 67 and 68 wherein an elevated expression relative to a known non-cancerous cell indicates a cancerous state or potentially cancerous state.

20 10. The process of claim 9 wherein said elevated expression is due to an increased copy number.

11. An isolated polypeptide comprising an amino acid sequence homologous to an amino acid sequence selected from the group consisting of
25 SEQ ID NO: 2, 5, 7, 9, 11, 13, 15, 18, 22, 24, 27, 29, 31, 33, 35, 37, 39, 41, 43, 46, 53, 55, 57, 59, 61, 63, 66 and 69 wherein any difference between said amino acid sequence and the corresponding sequence of SEQ ID NO: 2, 5, 7, 9, 11, 13, 15, 18, 22, 24, 27, 29, 31, 33, 35, 37, 39, 41, 43, 46, 53, 55, 57, 59, 61, 63, 66 and 69 is due solely to conservative amino acid substitutions and
30 wherein said isolated polypeptide comprises at least one immunogenic fragment.

12. An isolated polypeptide comprising an amino acid sequence selected from the group consisting of SEQ ID NO: 2, 5, 7, 9, 11, 13, 15, 18, 22, 24, 27, 29, 31, 33, 35, 37, 39, 41, 43, 46, 53, 55, 57, 59, 61, 63, 66 and 69.

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13. An antibody that reacts with a polypeptide comprising an amino acid sequence selected from the group consisting of SEQ ID NO: 2, 5, 7, 9, 11, 13, 15, 18, 22, 24, 27, 29, 31, 33, 35, 37, 39, 41, 43, 46, 53, 55, 57, 59, 61, 63, 66 and 69.

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14. The antibody of claim 13 wherein said antibody is a recombinant antibody.

15 15. The antibody of claim 13 wherein said antibody is a synthetic antibody.

16. The antibody of claim 13 wherein said antibody is a humanized antibody.

20 17. An immunoconjugate comprising the antibody of claim 13 and a cytotoxic agent.

25 18. The antibody of claim 17 wherein said cytotoxic agent is a member selected from the group consisting of a calicheamicin, a maytansinoid, an adozelesin, a cytotoxic protein, a taxol, a taxotere, a taxoid and DC1.

30 19. The immunoconjugate of claim 18 wherein said calicheamicin is calicheamicin γ_1^I , N-acetyl gamma calicheamicin dimethyl hydrazide or calicheamicin θ_1^I .

20. The immunoconjugate of claim 18 wherein said maytansinoid is DM1.

21. The immunoconjugate of claim 18 wherein said cytotoxic protein is ricin, abrin, gelonin, pseudomonas exotoxin or diphtheria toxin.

5 22. The immunoconjugate of claim 18 wherein said taxol is paclitaxel.

23. The immunoconjugate of claim 18 wherein said taxotere is docetaxel.

10 24. A process for treating cancer comprising contacting a cancerous cell *in vivo* with an agent having activity against an expression product encoded by a gene sequence selected from the group consisting of SEQ ID NO: 1, 3, 4, 6, 8, 10, 12, 14, 16, 17, 19, 20, 21, 23, 25, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 45, 47, 48, 50, 51, 52, 54, 56, 58, 60, 62, 64, 65, 67 and 68.

15 25. The process of claim 24 wherein said agent is an antibody of claim 13.

26. The process of claim 24 wherein said agent is an immunoconjugate
20 of claim 17.

27. An immunogenic composition comprising a polypeptide of claim 11.

28. An immunogenic composition comprising a polypeptide of claim 12.
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29. The process of claim 24 wherein said cancer is prostate cancer.

30. A process for treating cancer in an animal afflicted therewith comprising administering to said animal an amount of an immunogenic
30 composition of claim 27 sufficient to elicit the production of cytotoxic T lymphocytes specific for the polypeptide of claim 11.

31. A process for treating cancer in an animal afflicted therewith comprising administering to said animal an amount of an immunogenic composition of claim 28 sufficient to elicit the production of cytotoxic T lymphocytes specific for the polypeptide of claim 12.

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32. A process for treating a cancerous condition in an animal afflicted therewith comprising administering to said animal a therapeutically effective amount of an agent first identified as having anti-neoplastic activity using the process of claim 8.

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33. A process for protecting an animal against cancer comprising administering to an animal at risk of developing cancer a therapeutically effective amount of an agent first identified as having anti-neoplastic activity using the process of claim 8.

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34. The process of claim 30 wherein said animal is a human being.

35. The process of claim 30 wherein said cancer is prostate cancer.

20 36. A process for protecting an animal against cancer comprising administering to an animal at risk of developing cancer a therapeutically effective amount of a polynucleotide comprising the nucleotide sequence of SEQ ID NO: 1, 3, 4, 6, 8, 10, 12, 14, 16, 17, 19, 20, 21, 23, 25, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 45, 47, 48, 50, 51, 52, 54, 56, 58, 60, 62, 64, 65, 67
25 and 68.

37. The process of claim 36 wherein said polynucleotide is a DNA.

38. The process of claim 36 wherein said polynucleotide is an RNA.

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39. A process for protecting an animal against cancer comprising administering to an animal at risk of developing cancer a therapeutically

effective amount of a polynucleotide comprising the nucleotide sequence of SEQ ID NO: 1, 3, 4, 6, 8, 10, 12, 14, 16, 17, 19, 20, 21, 23, 25, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 45, 47, 48, 50, 51, 52, 54, 56, 58, 60, 62, 64, 65, 67 and 68.

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40. The process of claim 39 wherein said polynucleotide is a DNA.

41. The process of claim 39 wherein said polynucleotide is an RNA.

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42. A method for diagnosing prostate cancer in a patient comprising determining the presence of a cancer-related polypeptide in one or more prostate cells of said patient wherein said cancer-related polypeptide comprises a polypeptide that reacts with an antibody specific for a polypeptide having an amino acid sequence selected from SEQ ID NO: 2, 5, 7, 9, 11, 13, 15, 18, 22, 24, 27, 29, 31, 33, 35, 37, 39, 41, 43, 46, 53, 55, 57, 59, 61, 63, 66 and 69.

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43. The method of claim 42 wherein said cancer-related polypeptide comprises a polypeptide of SEQ ID NO: 2, 5, 7, 9, 11, 13, 15, 18, 22, 24, 27, 29, 31, 33, 35, 37, 39, 41, 43, 46, 53, 55, 57, 59, 61, 63, 66 and 69.

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44. The method of claim 42 wherein said cancer-related polypeptide is a member selected from the group consisting of SEQ ID NO: 2, 5, 7, 9, 11, 13, 15, 18, 22, 24, 27, 29, 31, 33, 35, 37, 39, 41, 43, 46, 53, 55, 57, 59, 61, 63, 66 and 69.

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45. A method for producing test data with respect to the gene modulating activity of a compound comprising:

(a) contacting a compound with a cell expressing a polynucleotide comprising a nucleotide sequence corresponding to a gene whose expression is increased in a cancerous cell over that in a non-cancerous cell and under conditions wherein said polynucleotide is being expressed,

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(b) determining a change in expression of polynucleotides as a result of said contacting, and

- (c) producing test data with respect to the gene modulating activity of said compound based on a decrease in the expression of the determined gene whose expression is otherwise increased in a cancerous cell over that in a non-cancerous cell indicating gene modulating activity.
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